CLAIMS:

1. A circuit comprising:

charging circuitry adapted to apply electrical energy to an electrochemical device to charge the electrochemical device, and the electrochemical device being configured to assume an open-circuit condition in a substantially charged state;

shunting circuitry electrically coupled with the charging circuitry and configured to shunt the electrical energy around the electrochemical device responsive to the electrochemical device reaching the substantially charged state; and

indication circuitry configured to output a signal responsive to the shunting of the electrical energy to indicate a charge status of the electrochemical device.

2. The circuit of claim 1 wherein the charging circuitry comprises a switch, and further comprising control circuitry coupled with the indication circuitry and configured to control the switch to cease the application of the electrical energy to the electrochemical device responsive to the signal from the indication circuitry.

3. The circuit of claim 2 wherein the shunting circuitry is configured to electrically isolate a positive terminal of the electrochemical device after the application of the electrical energy has been ceased.

4. The circuit of claim 2 wherein the charging circuitry is configured to apply the electrical energy to a plurality of electrochemical devices, the shunting circuitry is configured to shunt the electrical energy around respective ones of the electrochemical devices, and the control circuitry is configured to control the switch to cease the application of the electrical energy responsive to the electrical energy being shunted around all of the electrochemical devices.

5. The circuit of claim 1 wherein the shunting circuitry comprises a passive shunting device configured to shunt the electrical energy without the use of control circuitry.

6. The circuit of claim 1 wherein the shunting circuitry comprises a breakdown device.

7. The circuit of claim 1 wherein the shunting circuitry comprises a zener diode.

8. The circuit of claim 1 further comprising the electrochemical device.

9. The circuit of claim 8 wherein the electrochemical device comprises a lithium cell having a lithium-mixed metal electrode.

10. An apparatus comprising:

means for applying electrical energy to an electrochemical device to charge the electrochemical device;

means for passively shunting the electrical energy around the electrochemical device responsive to the electrochemical device being substantially charged; and

means for indicating a state of charge of the electrochemical device responsive to the electrical energy being passively shunted around the electrochemical device.

11. The apparatus of claim 10 further comprising means for ceasing application of the electrical energy to the electrochemical device.

12. The apparatus of claim 11 wherein the means for passively shunting the electrical energy further comprise means for electrically isolating a positive terminal of the electrochemical device responsive to ceasing the application.

13. The apparatus of claim 10 further comprising the electrochemical device.

14. The apparatus of claim 13 wherein the electrochemical device comprises a lithium cell having a lithium-mixed metal electrode.

15. An electrochemical device charging method comprising:

providing an electrochemical device having an end-of-charge charge voltage;

applying electrical energy having a voltage greater than the end-of-charge charge voltage to the electrochemical device to charge the electrochemical device and to provide the electrochemical device in an over-voltage condition;

shunting the electrical energy around the electrochemical device provided in the over-voltage condition; and

detecting the shunting of the electrical energy to provide state of charge information of the electrochemical device.

16. The method of claim 15 further comprising ceasing the applying responsive to the detecting.

17. The method of claim 16 further comprising electrically isolating a positive terminal of the electrochemical device after the ceasing.

18. The method of claim 15 wherein the shunting comprises shunting using a passive device.

19. The method of claim 15 wherein the providing comprises providing a lithium cell having a lithium-mixed metal electrode.

20. An electrochemical device charging method comprising:

providing a plurality of electrically coupled electrochemical devices;

applying electrical energy to the electrochemical devices to charge the electrochemical devices;

shunting the electrical energy around at least one of the electrochemical devices responsive to the at least one electrochemical device reaching a predefined state of charge; and

indicating the shunting to indicate a state of charge of the at least one electrochemical device.

21. The method of claim 20 wherein the shunting comprises shunting around all of the electrochemical devices responsive to all of the electrochemical devices reaching the predefined state of charge, and the indicating comprises indicating the shunting around all of the electrochemical devices, and further comprising ceasing the applying responsive to the indicating the shunting of the electrical energy around all of the electrochemical devices.

22. The method of claim 20 further comprising electrically isolating a positive terminal of the at least one electrochemical device after the ceasing.

23. The method of claim 20 wherein the shunting comprises shunting using a passive shunting device.

24. The method of claim 20 wherein the providing comprises providing a plurality of lithium cells individually having a lithium-mixed metal electrode.

25. An electrochemical device charging method comprising:

providing a plurality of electrically coupled electrochemical devices;

applying electrical energy to the electrochemical devices to charge the electrochemical devices, and wherein the electrochemical devices individually assume an open-circuit condition responsive to being substantially charged; and

indicating individual ones of the electrochemical devices obtaining a substantially charged state responsive to respective individual ones of the electrochemical devices assuming the open-circuit condition.

26. The method of claim 25 further comprising ceasing the applying responsive to an indication that all of the electrochemical devices have obtained the substantially charged state.

27. The method of claim 26 further comprising electrically isolating positive terminals of the electrochemical devices after the ceasing.

28. The method of claim 25 further comprising shunting the electrical energy around individual ones of the electrochemical devices which have assumed the open-circuit condition.

29. The method of claim 28 wherein the shunting comprises shunting using a passive device.

30. The method of claim 25 wherein the providing comprises providing a plurality of lithium cells individually having a lithium-mixed metal electrode.

31. A lithium-mixed metal electrode cell charging method comprising:

providing a plurality of series-coupled lithium cells individually having a lithium-mixed metal electrode, wherein the cells are individually configured to assume an open-circuit condition responsive to being substantially charged;

applying electrical energy to the lithium cells to charge the lithium cells;

passively shunting the electrical energy around individual ones of the lithium cells which have assumed the open-circuit condition, wherein the passively shunting comprises shunting using a breakdown device;

indicating the shunting;

ceasing the applying responsive to the indicating and responsive to all of the lithium cells being substantially charged; and

electrically isolating positive terminals of the lithium cells after the ceasing.